

Nevada Offsites

Nevada Offsites Historical

Underground Nuclear Test Sites

The Nevada Offsites are underground nuclear test sites located outside the boundaries of the Nevada Test Site. The U.S. Atomic Energy Commission conducted nuclear tests at eight sites between 1961 and 1973 under the Plowshare, Vela Uniform, and weapons-testing programs. Another off-site location, Project Chariot, was evaluated under the Plowshare Program, but nuclear tests were not conducted there.

Responsibility for the eight Nevada Offsites and Project Chariot was transferred from EM to LM in 2006 after EM completed surface cleanup. The eight Nevada Offsites include Amchitka, Alaska; Central Nevada Test Area and Shoal, Nevada; Gasbuggy and Gnome-Coach, New Mexico; Rio Blanco and Rulison, Colorado; and Salmon, Mississippi. Transition activities included joint EM and LM public meetings for stakeholders at the Amchitka and Salmon sites to inform the public about site activities and introduce LM as the site manager.

LM is responsible for all activities associated with long-term surveillance and maintenance at the Nevada Offsites including monitoring environmental conditions, reviewing institutional controls, maintaining site records, working with regulators, and responding to stakeholder inquiries. LM developed site management plans for each of the sites, and is producing long-term maintenance and surveillance plans for each site as warranted.

Remediation of the subsurface in and around the sites' test cavities is not planned because there is no known feasible way to remove radioactive contamination in nuclear cavities.

Since subsurface remediation is not possible, computer modeling at Central Nevada Test Area, and Rio Blanco and Rulison sites was performed to predict possible contaminant migration. The models are verified with ongoing sampling near the sites. Site computer models will be updated as new information becomes available. LM also continues to monitor ground-

water near the sites and recently completed long-term hydrologic monitoring plans for the sites.

Public involvement remains high at some of the sites, particularly at Rulison and Rio Blanco, where there are concerns about drilling for natural gas. LM continues to hold public meetings to keep stakeholders updated on site activities. LM also meets regularly with regulators and elected officials in the five states where the Nevada Offsites are located to discuss ongoing issues and to ensure that the sites remain safe for the public and the environment.

Plowshare Program

The Plowshare Program was a research and development initiative aimed at determining the technical and economic feasibility of peaceful application of nuclear energy. The intent was to provide an inexpensive energy source that could be used in a number of commercial applications.

Project Chariot Experiments (1958–1962)

Site: Northwest Alaskan coast, Cape Thompson

Objective: To provide environmental data to aid in determining feasibility of conducting Plowshare excavation experiments. Tracer tests were also conducted.

Gnome-Coach Nuclear Test

(December 10, 1961)

Site: near Carlsbad, New Mexico

Objectives: To determine the effects and products of a nuclear detonation in a salt medium.

Gasbuggy Nuclear Test

(December 10, 1967)

Site: San Juan Basin, 55 miles east of Farmington, New Mexico

Objective: To investigate the feasibility of using nuclear explosives to stimulate a low-permeability gas field. This was the first Plowshare joint Government-industry nuclear experiment to test an industrial application.



Rulison Nuclear Test (September 10, 1969)

Site: Grand Valley, Garfield County, Colorado

Objective: To investigate the feasibility of using nuclear explosives to stimulate gas production in a low-permeability gas field.

Rio Blanco Nuclear Test (May 17, 1973)

(three simultaneous detonations from same hole)

Site: Rifle, Colorado

Objective: A gas stimulation experiment to investigate the feasibility of using a nuclear detonation to stimulate a low-producing gas field.

Vela Uniform Program

The Vela Uniform Program was part of a DOD research and development program intended to improve the capability of detecting, monitoring, and identifying underground and high-altitude nuclear detonations.

Shoal Nuclear Test (October 26, 1963)

Site: Churchill County, Nevada

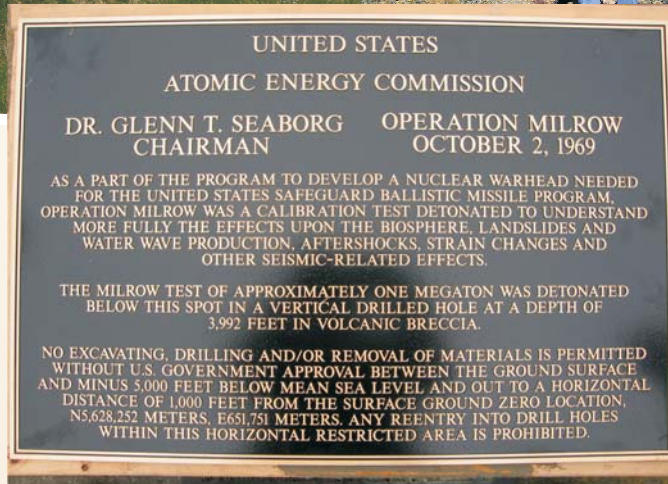
Objective: To investigate the behavior and characteristics of seismic signals generated by a nuclear detonation in a granite rock formation and differentiate them from seismic signals generated by naturally occurring earthquakes.

Long Shot Nuclear Test

(October 29, 1965)

Site: Amchitka Island, Alaska

Objective: To determine the behavior and characteristics of seismic signals generated by nuclear detonations and differentiate them from seismic signals generated by naturally occurring earthquakes.



Plaque installed at the Milrow Nuclear Test site.

Salmon Nuclear Tests

(October 22, 1964 and December 3, 1966)

Site: Lamar County, Mississippi

Objective: To assess remote detonation detection capabilities. These were the only nuclear weapons test detonations performed in the eastern United States.

Central Nevada Test Area

(January 19, 1968) (faultless nuclear test)

Site: Hot Creek Valley, Nevada

Objective: To study the behavior and characteristics of seismic signals generated by nuclear detonations and differentiate them from seismic signals generated by naturally occurring earthquakes.

Nuclear Weapons Testing Program

Milrow Nuclear Test (October 2, 1969)

Site: Amchitka Island, Alaska

Objective: To test a calibration shot intended to produce data from which the impact of larger detonations could be predicted, and specifically, to determine whether the planned Cannikin shot could be performed safely.

Cannikin Nuclear Test (November 6, 1971)

Site: Amchitka Island, Alaska

Objective: To test the design of the Spartan anti-ballistic missile. This was the largest underground nuclear test in U.S. history.